

Appendix D: Error codes and severity levels

This feature allows you to assign severity levels, text, and actions to Meridian IVR 2.0/I. The severity file is located in the following directory:
/u/ivr/ui_lang/en_US/severity.

Note that you can access a default of the severity file in the following directory: */u/ivr/ui_lang/en_US/severity.sample.*

Any Meridian IVR 2.0/I error is considered a log event, as is the start-up or shutdown of any process. Whenever a log event occurs, Meridian IVR 2.0/I adds the text string and carries out the action you assign.

This feature allows you to make informed responses to log events depending on their severity level. For example, a severity code ADVISORY informs you that a log event occurred, but since its event code corresponds with ADVISORY, no action is necessary. An event associated with the severity code FATAL, however, generally requires you to take action.

When log events occur, the event log and the User Error Handler (UEH) log them. You may encounter situations when you only wish to have log events above or below a certain severity level sent to the UEH. The Error Codes and Severity Levels feature allows you to set a threshold for the log events sent to the UEH.

The Error Codes and Severity Levels feature consists of a severity file which replaces the alarm file in previous versions of Meridian IVR 2.0/I. The severity file translates a numerical log event into a severity level, text string, and action.

The severity file consists of three parts. The first part sets the severity level threshold for the log events sent to the UEH. The second part maps the severity levels to the text strings and actions. The third part maps the error codes to the severity levels.

You can create the severity file with a text editor like vi.

Severity Level Threshold

The first part of the severity file determines the threshold above or below which log events will be sent to the UEH. Before entering a value in this field, you must decide on the range of severity levels you are going to use for all log events. Once you have determined this, you must determine a severity level above which or below which log events will be sent to the UEH.

The following entry sets the severity level threshold:

LEVEL N greater than or less than

where **N** is the severity level threshold. Enter **GE** for greater than or equal to, or **LE** for less than or equal to. Separate the entries with spaces or tabs.

Severity Level, Text String, and Action

The second part of the severity file maps the severity level to the text string and action. You map the severity level, text string, and action in the following manner:

MAPseverity leveltext stringaction

Separate the entries with spaces or tabs.

Severity Level

There are five standard levels of severity (0-4). You are not limited to these severity levels. You can define as many severity levels as you find necessary.

Text String

You should use the text string to describe the level of severity of the log event. Typically, ADVISORY, MINOR, MAJOR, CRITICAL, and FATAL are the standard descriptions of the 5 standard severity levels. You may rename existing severity levels.

Action

You can tell Meridian IVR 2.0/I to carry out a Meridian IVR 2.0/I System Action or a User Defined Action. An Meridian IVR 2.0/I System Action is a predefined system action. A User Defined Action is an action you define to carry out a task specific to your needs.

Note: Meridian IVR 2.0/I is not responsible for managing User Defined Actions after their execution. Therefore, we recommend them for expert Meridian IVR 2.0/I users only.

Mapping Error Codes to Severity Levels

The third part of the severity file maps the Meridian IVR 2.0/I error codes to the severity levels defined in the first part of the severity file. You map them in a simple two column format with spaces or tabs in between as shown:

```
0  0
1  0
2  1
3  1
4  1
5  2
6  0
```

The first column is the Meridian IVR 2.0/I error code. The second column is the severity level. It is a good idea to comment this part of the severity file in order to provide a key to the meaning of the Meridian IVR 2.0/I error codes. You can map the error codes and severity levels in any order you desire. For example:

```
490    3
13801
0      0
```

560 2
109 4

Severity File Syntax

Figure D-1 illustrates an example of the severity file.

Figure D-1
Example severity file

SYS V				
#	Severity file with severity threshold,			
#	Severity Threshold			
#	-----			
	LEVEL	3	GE	
#				
#	KEY	LEVEL	STRING	ACTION
#	---	-----	-----	-----
	MAP	0	ADVISORY	"echo HOM
	MAP	1	MINOR	".../tools/
	MAP	2	MAJOR	NOACTION
	MAP	3	CRITICAL	NOACTION
	MAP	4	FATAL	MINOR

Severity Threshold

The first non-comment field in the severity file is the severity level threshold. In this field, enter LEVEL, then the severity level you wish to log to the UEH, then GE or LE. To log events greater than or equal to the severity level, enter GE after the severity level. To log events less than or equal to the severity level, enter LE after the severity level. In Figure D-1, the UEH will log events greater than or equal to severity level 3.

Key

Enter MAP in this column to instruct Meridian IVR 2.0/I to associate the severity level with the text string and action.

Level

In this column, enter the numerical values for the different severity levels you wish to use.

String

In this column, enter an eight-character or less text string to describe log events with the corresponding severity level. Meridian IVR 2.0/I will trim a text string exceeding eight characters.

Action

In this column, enter the action you wish Meridian IVR 2.0/I to carry out upon encountering a log event with a defined severity level. You have two categories of actions to choose from—Meridian IVR 2.0/I **System Actions** and **User Defined Actions**.

The Meridian IVR 2.0/I System Actions are MINOR, CONSOLE, and NOACTION. MINOR will turn on the minor system alarm on the AP. CONSOLE prints the error message in the xconsole window. NOACTION tells Meridian IVR 2.0/I to ignore the event completely. The difference between an undefined event and an event assigned NOACTION is that Meridian IVR 2.0/I will still consider an undefined event an error and log it to the event file.

A User Defined Action is any UNIX command you could execute or any executable you could run from the system prompt. Simply place the text you would enter at the system prompt in quotation marks as shown in severity levels 0 and 1 in Figure D-1.

If Meridian IVR 2.0/I encounters an error when trying to execute your User Defined Function, it will display a message on the screen but will take no action to correct the error. For this reason, User Defined Actions should be reserved for expert Meridian IVR 2.0/I users.

You can combine Meridian IVR 2.0/I System Actions and User Defined Actions by separating them with a comma.

Error code

In this column, enter the number of the Meridian IVR 2.0/I Transaction Log message.

Severity level

In this column, enter the severity level defined in the first part of the severity file.